picoair

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1. Safety Precautions

This product is not waterproof – avoid using it near water or wet places.

There is a risk of malfunction if product is used in places where sudden or extreme temperature changes occur.

Applying excessive force or impact to this product may result in product damage, and will void warranty.

Never attempt to disassemble or service this product yourself. Doing so can result in electrical shock and void warranty.

This is a Class 3R Laser product. For your safety, do not stare directly into the laser source. Doing so could damage your eyes.

FCC Compliance Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference to another device.
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Class Notice

This equipment has been tested and found to comply within the limits for a Class B digital device, pursuant to Part15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment.

This equipment generates, uses, and radiates radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur with special installation.

If this equipment does cause interference to radio or television reception, which can be

determined by turning the equipment off and on, the user is encouraged to correct the

interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.

FCC Caution

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada Statement

This device complies with Industry Canada license- exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible
    d'en compromettre le fonctionnement.

CE Caution

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

IEC-60825-1 Caution

Use of control or adjustments or performances of procedures other than those specified here in may result in hazardous radiation exposure.

2. Certifications

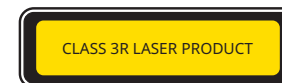**KC : MSIP-CMM-CLK-PICOAIR**

FCC ID : TCLPICOAIR

CE1177

RoHS compliant

RoHS

Industry Canada   Industrie Canada

IC No : 10211A-PICOAIR

CLASS 3R LASER PRODUCT

IEC-60825-1 : Class 3R Laser

3. Environmentally Friendly Disposal and Recycling

To protect the environment, dispose this product separately from household waste once it has reached its end of life, or take it to your local electronic waste disposal center.

Built-in Battery

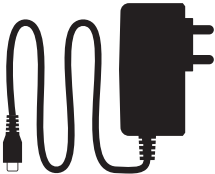|	
Battery Type	Rechargeable Lithium-ion Polymer Battery
Battery Operating Time	Approx. 150 minutes (with continuous use)
Battery Capacity	3140 mAh @ 3.7V
Charging the Battery	Use supplied USB power adapter to begin charging the battery. Battery status is indicated by four blue LED indicators while charging. (4 LED : 100% / 3 LED : 75% / 2 LED : 50% / 1 LED : 25%)
Battery Charging Time	Approx. 270 minutes

4. Package Contents
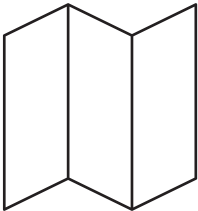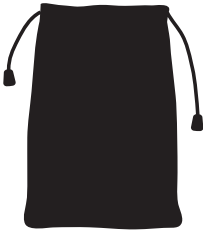
PicoAir **User Manual** **Power Adapter** **Tripod** **Pouch**

5. Product Features

PicoAir is a laser-based pico projector that easily fits in your pocket for superior portability. It allows you to project contents in your mobile devices onto any surface via Miracast or DLNA capability.

6. Identifying Parts

Touch-sensitive Volume Down

Touch-sensitive Volume Up

Backlit Battery Indicator Light

Speaker

3.5mm Audio Out

Miracast or DLNA Switch

CHARGE – Micro USB port for charging

Battery Status Indicator

CHARGE   M / D

SELECT

Select Button

Power Button

Reset Button

FCC ID : TCLPICOAIR   CE1177   KC : MSIP-CMM-CLK-PICOAIR
IC : 10211A-PICOAIR
Model : PicoAir   DC : 5V 2A   Celluon, Inc.   Made in Korea

7. Connecting PicoAir

a. Compatible Operating Systems

For Wireless Connection	
Miracast	DLNA
Android OS 4.2 or later Windows OS 8.1 or higher Any OS that supports Screen Mirroring functionality	Any digital devices that support DLNA protocol * Using DLNA connection requires downloading DLNA streaming app from the App Store or Play Store.

b. How to Connect

M/D

Using Miracast :
The Miracast capability is called different names on difference devices. (Samsung/Sony – Screen Mirroring , HTC – Media Output)
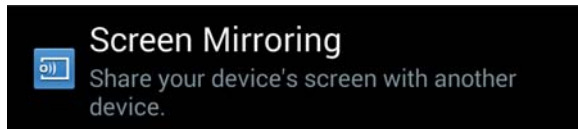Please find this capability in the settings app on the device.

1. Turn on PicoAir by pressing power button for
2-3 seconds.

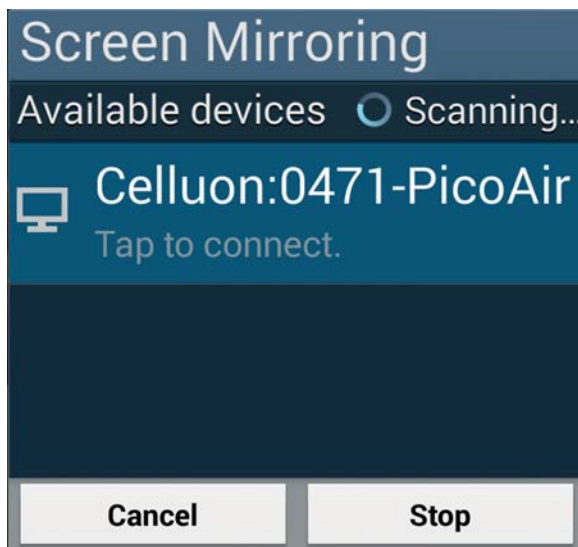2. Celluon logo will display upon power on.

3. After 20-30 seconds, "Ready to Connect" screen will display after Celluon logo.

Screen Mirroring
Share your device's screen with another device.

4. On a desired mobile device, find and select Screen Mirroring / Media Output.

5. Mobile device will search for nearby devices to connect.

Screen Mirroring

Available devices ○ Scanning...

🖥 **Celluon:0471-PicoAir**
Tap to connect.

Cancel   Stop

Screen Mirroring

Connecting...

Cancel

6. When device discovers "Celluon PicoAir", tab to connect.
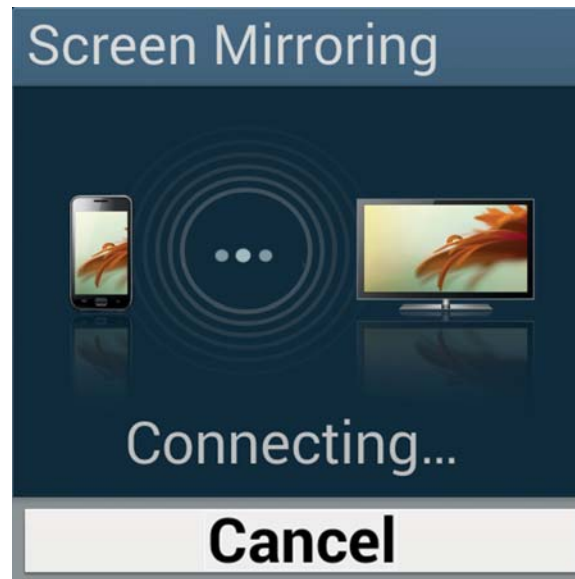
7. Mobile device will say "Connected" and PicoAir will start mirroring display.

* It is recommended to disconnect any previously connected WiFi network before attempting to connect via Miracast (screen mirroring).

M/D

Using DLNA :

* To connect to devices using DLNA capability, you must install a DLNA streaming app (i.e. iMediaShare) on your mobile device. Apps can be downloaded from AppStore/GooglePlay.
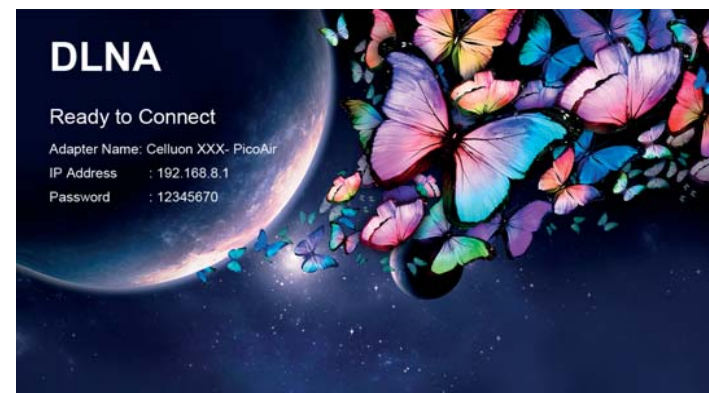

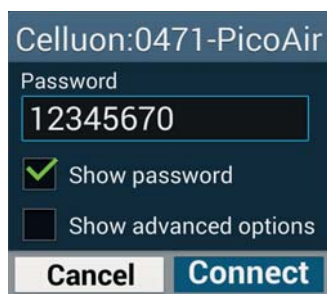1. Turn on PicoAir by pressing power button and holding for 2-3 seconds.

Preparing Wireless Connection...

2. Celluon logo will display upon powering on, followed by a "Preparing wireless connection" screen.

3. Locate the mode switch next to the micro USB charge port on the side of device. Slide the switch to "D" to change to DLNA mode.

DLNA

Ready to Connect

Adapter Name: Celluon XXX- PicoAir
IP Address   : 192.168.8.1
Password   : 12345670

4. DLNA "Ready to Connect" screen will display upon completion of mode switch.

5. On a desired mobile device, go to WiFi seting, and connect to "Celluon PicoAir". Use password "12345670" to connect.

6. When Wifi is successfully connected, open the installed DLNA streaming application on the mobile device.
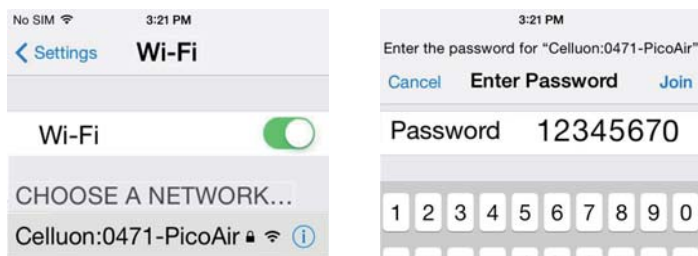
7. Select desired content to display.

8. Select display location: Celluon PicoAir

9. Mobile device will say "Connected" and PicoAir will start projecting selecting contents.

*** For DLNA connection with iOS devices:

1. Follow above steps 1-9.

C. Switching Connection Mode
 - Use the sliding mode switch located next to the micro USB charge port to change connection mode.

8. Making Adjustments

Volume Adjustment
*Volume is controlled directly from PicoAir.
Locate touch volume control area on top of device. Adjust the volume by lightly touching the + or – pattern.

Speaker / Earphone Usage
Please connect a speaker or an earphone to the 3.5mm audio out jack.

Laser Alignment
When the images seem blurry and/or the colors appear skewed, please visit Celluon website at www.celluon.com for Laser Alignment instructions.

Engine Firmware Update
Press and hold battery status indicator for about 3 seconds. MENU screen will be displayed for menu selection. Use volume control patterns (+ & -) to select "Firmware Update".
Follow instructions on screen to update the engine firmware.

Product Firmware Update
Please visit Celluon website www.celluon.com for the latest system firmware update.

9. Charging the PicoAir

Charging Time	Operating Time
4-5 hours	2.5 to 3 hours with continuous use

Battery Status

LED Indicator	Status	Description
	0% charged	Volume control + & - sensors will blink to indicate low battery status
●	25% charged	First LED indicator remains solid. When charging at this stage, the next LED indicator will blink to indicate it is being charged.
● ●	50% charged	First two LED indicators remain solid. When charging at this stage, the next LED indicator will blink to indicate it is being charged.
● ● ●	75% charged	First three LED indicators remain solid. When charging at this stage, the next LED indicator will blink to indicate it is being charged.
● ● ● ●	100% charged	All four LED indicators will remain solid.

1. Locate micro USB port next to the battery status button.
2. Use the supplied AC adapter to charge the PicoAir thought the micro USB port.

- Please fully charge PicoAir's internal battery before first use (approximately 2 to 4 hours).
- A low battery warning icon will show on the screen when the battery is low.
- Use the included power adapter to charge your PicoAir. If the battery is too low, PicoAir will automatically shut off.
- Please use the included power adapter or any adapter supports 5V 2A to charge PicoAir.

** any adapter with lower spec than 5V 2A can damage the adapter when charging.

10. Troubleshooting

Mobile device cannot find Celluon PicoAir during Miracast connection search	Please make sure PicoAir is on Miracast mode. This may also be due to a particularly heavy wireless traffic. If this is the case, please reset the device by pressing the reset button on the back of device.
Cannot stream contents through DLNA application	Please make sure device's WiFi is properly connected to PicoAir's WiFi. For DLNA connection, please make sure to connect using the password "12345670"
It takes a long time to display contents through DLNA mode	It depends on each DLNA streaming app to project contents through PicoAir. For large media files, it may take some time to load and convert the video to correct format.
PicoAir is connected, but only the black screen is projected from the device	Please check if the connected mobile device is on sleep mode. If the screen of the connected device goes black, the projected screen will go black as well. Note that if the volume control LED patterns are on, the PicoAir is powered on.
There is no sound	Please make sure the volume level of the PicoAir and/or connected device is not in the mute status.
The video stops playing periodically	Please make sure connected device has enough battery to play the video. If both devices have enough battery, this may be due to unstable WiFi connection. Please disconnect and reconnect the device.
Device automatically shuts down during use	This may be due to the depletion of battery or high temperature of the product. If the product is left in a place where the enviornmental temperature is high (such as in a blanket or near heater), the power will turn off automatically in protection of fire hazard. Please cool the product and use it within specified operating temperature before turning it on again. If the product has been shut down due to the depletion of battery, please charge the device before turning it back on.
PicoAir's screen is frozen; it stopped playing the video / no response from buttons when pressed / cannot convert modes	Please reset the device by pressing the reset button on the back of device. Refer to "Identifying Parts" section for the location of reset button.
Product makes abnormal noises	Please contact Celluon Customer Service for further assistance
The projected image is unclear	This is due to the shifts in laser diode. Please refer to Laser Alignment instruction page to adjust shifted lasers.
Connection through Miracast intermittently disconnects during use	This is due to the noise occurred by double wireless connection. Try to connect again after disconnecting all the previously connected wireless networks.
Can users update PicoAir's firmware	Please visit Celluon website www.celluon.com for instructions to update PicoAir's firmware.

11. Specifications

Item		Spec.	Remark
Display Performance	Display Method	Laser	
	Product Lifetime	10,000 hours	
	Brightness	30 ANSI lumens	The perceived brightness of laser projectors with a given ANSI brightness is 50%+ higher than that of the LED based projectors
	Aspect ratio	16:9	
	Throw Ratio	1.1	
	Sequential Contrast Ratio	80,000 : 1	
	Resolution	1920 x 720p	HD resolution
	Color Depth	1.67M colors (RGB 24bit)	
	Focus	Focus Free (always in focus)	No focus wheel required
	Max. Image (Screen) Size	250 inches	In optimal lighting conditions
Measurement	Size	150 x 73 x 13.4 mm (6 x 3 x 0.45 inches)	
	Weight	170 g (0.38 lbs)	
Electrical Characteristics	Battery Capacity	3200 mAh	
	Operating Time	Apprx. 2.5 hrs	The operating time may vary depending on the environment of use
	Speaker	1.0W	
	Audio Interface	3.5mm ear phone jack	
	Wireless	Dual (2.4, 5G)	
Laser Safety	Classification	IEC Class 3R	Consumer safe device
Environmental Condition	Operating Temperature	0°C - 35°C	
Compatibility	Miracast	Yes	For devices with Android OS / Mode switch
	DLNA	Yes	For devices with iOS / Mode switch / Application Required
Adaptor	MicroUSB Type	5V / Max 2A	"Please use the included power adapter or any adapter supports 5V 2A to charge PicoAir. ** any adapter with lower spec than 5V 2A can damage the adapter when charging.

12. Warranty

- Celluon warrants this product to be free from defects in materials and workmanship under normal use for a period of one (1) year from the date of purchase, as evidenced by the receipt of purchase.

- During the warranty period, Celluon shall repair or replace the product if defective. If replaced, the replacement shall be with a product of equal or greater value.

- This warranty is limited to the purchaser and is not transferable.

Please contact support@celluon.com for warranty supports.